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**AMENDMENTS TO THE CLAIMS:**

This listing of claims will replace all prior versions and listing of the claims in the application:

**LISTING OF THE CLAIMS:**

Claims 1-17 (canceled).

Claim 18 (amended) An ultracentrifuge tube comprising an upper region, a middle region and a lower region wherein an inner diameter of said upper region is larger than an inner diameter of said lower region, wherein said upper region is separated from said lower region by said middle region having at least one portion with parallel inner sides and an overall decreasing diameter from said upper region toward said lower region and wherein said lower region has parallel inner sides and a closed bottom.

Claim 19 (previously presented) The ultracentrifuge tube of claim 18, wherein said middle region comprises one or more serrations.

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Claim 20 (previously presented) The ultracentrifuge tube of claim 18, wherein said lower region has an inner diameter small enough to trap an air bubble between two layers of liquid such that the air bubble will keep said two layers of liquid separate so long as said centrifuge tube is at rest.

Claim 21 (previously presented) The ultracentrifuge tube of claim 18, wherein said inner diameter of said lower region is smaller than 0.25 inch.

Claim 22 (previously presented) The ultracentrifuge tube of claim 18, wherein said lower region is at least 5% of the total length of said tube.

Claim 23 (previously presented) The ultracentrifuge tube of claim 18, wherein the inner surfaces are polished by vapor polishing.

Claim 24 (previously presented) The ultracentrifuge tube of claim 18, wherein the inner surfaces are coated with adhering polymer to prevent adsorption of biological particles.

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Claim 25 (previously presented) The ultracentrifuge tube of claim 18, wherein said tube is prepared from materials such that said tube can be centrifuged at velocities high enough to band viruses in CsCl gradients without said tube breaking.

Claims 26-29 (canceled).

Claim 30 (previously presented) The ultracentrifuge tube of claim 18, wherein said tube is made of polycarbonate.

Claim 31 (canceled).

Claim 32 (previously presented) The ultracentrifuge tube of claim 18, wherein said upper region has an outer diameter larger than an outer diameter of said lower region.

Claims 33-55 (canceled).